REMARKS

Claims 1, 3, 5, 7, and 10 are pending, of which Claims 1, 3, 5, and 7 are independent.

Support for the amendments to Claims 1, 3, 5, and 7 can be found at least in page 9, lines 9–27, of the application as filed.

Support for new dependent Claims 15–18 can also be found in page 9, lines 9–27, of the application as filed.

Summary of Embodiments of Applicants' Invention

An example of one embodiment of Applicants' invention is described below to highlight some aspects of the invention without limitation of the claims. More on the embodiment described below can be found at least in page 5, lines 8–24; page 9, lines 9–27; and in Figures 2, 3, and 6 of the application as filed. The description below is an example of one of many embodiments that fall within the scope of Applicants' claims and is provided to illustrate some aspects of Applicants' invention, not to limit the claims.

Embodiments include a router configured to connect to another router using a composite trunk formed by aggregating multiple physical links. Applicants' Figures 2 and 3 show an example router 1 connected to router 2 via a composite trunk 10 formed of four trunks 11–14. When router 1 receives a packet for router 2, router 1 switches the packet to one of the line cards 41–44 coupled to the composite trunk 10 using a switching fabric 100 that routes the packet according to values in a fabric forwarding table (e.g., the table shown in FIG. 6). An output port selector (not shown) balances the load across the trunks 11–14 of the composite trunk 10 by distributing the packets across the individual trunks comprising the composite trunk. Typically, the forwarding table "includes entries to multiple routes for load distribution but weights the number of entries to each route to favor the shortest route." Application as filed, page 9, lines 15–16 (emphasis supplied). If a trunk 11 of the composite trunk 10 becomes a bottleneck, "[t]he load can be balanced by finding a forwarding table entry that directs packets to the overloaded output trunk and rewriting the route in this entry to direct packets to a more lightly loaded output trunk [e.g., trunks 12–14]." *Id.*, page 9, line 22 (emphasis supplied).

Rejection of Claims 1 and 5 under 35 U.S.C. § 103

Claims 1 and 5 have been rejected as being unpatentable over U.S. Patent Application Publication No. 2004/0037278 A1 (Wong) and U.S. Patent No. 6,262,974 (Chevalier). Specifically, the instant Office Action states that it would have been obvious to modify Wong's packet switch to use Chevalier's load balancing approach.

Wong's FIG. 1 shows a packet switch 10 that switches signals between network ports 14 via network links 15, which can be aggregated into trunked links 17. A packet routing unit 180 in the switch 10 routes incoming packets according to routing information in a packet routing table 134 (FIGS. 3A and 3B) with an address resolution circuit 136 (FIGS. 3A, 3B, 5, 7, and 8). A load balanced trunked link port mapping system 168 in the switch 10 balances the packets with a load balancing unit 190 by routing a packet based on its input port; the packet's source; or both the packet's source and the packet's destination. Wong does not suggest "dynamically weighting a number of entries to each route," as in Claims 1 and 5 as amended, much less dynamic weighting that "favors a shortest route to the destination," as in Claims 15 and 16.

Chevalier discloses a method of splitting predefined reservable link bandwidth into portions that can be assigned on a priority basis. Although Chevalier refers to "load balancing for fairly distributing traffic over all the links of the network to avoid local congestion" (col. 2, lines 37–38), Chevalier does not elaborate on load balancing. Instead, Chevalier merely states that the network computes paths using topology databases, which store information from network management services. Chevalier also does not suggest "dynamically weighting a number of entries to each route," as in Claims 1 and 5 as amended, much less dynamic weighting that "favors a shortest route to the destination," as in Claims 15 and 16.

Because neither Wong nor Chevalier suggests "dynamically weighting a number of entries to each route," as in Claims 1 and 5 as amended, combining Wong with Chevalier does not result in a method or router that includes "dynamically weighting a number of entries to each route." Thus, Claims 1 and 5 as amended patentably distinguish Wong and Chevalier. Wong and Chevalier also fail to disclose dynamic weighting that "favors a shortest route to the destination," as in Claims 15 and 16, so Claims 15 and 16 patentably distinguish Wong and Chevalier for additional reasons as well.

Accordingly, Applicants respectfully submit that the rejection of Claims 1 and 5 is overcome and request withdrawal of the same.

Rejection of Claims 3, 7, and 10 under 35 U.S.C. § 103

Claims 3, 7, and 10 have been rejected as being unpatentable over Wong and U.S. Patent No. 5,095,480 (Fenner) in view of Chevalier. The instant Office Action states that it would have been obvious to modify Wong's packet switch to use Chevalier's load balancing approach and Fenner's dynamic hashing and memory allocation techniques.

Fenner discloses techniques to "automatically adjust the size of the routing table directory and routing records" (col. 4, lines 61–63; emphasis supplied). For example, Fenner's FIG. 4 shows blocks 138, 142, and 144 that compress destination or source address from the header 124 of an arriving packet. The compressed values are used to create an index 136 keyed to an address directory 130. Fenner's system changes the amount of memory used to store the address directory 130, not the content of the address directory 130.

In contrast, Claims 3 and 7 as amended recite "routes in [a] table [that are] dynamically rewritable." As Fenner discloses changing memory allocation for a routing table directory and routing records, not rewriting table entries to another table entry, Fenner does not disclose table routes that are dynamically rewritable. Thus, Fenner does not disclose dynamically adjusting table routes. As discussed above, neither Wong nor Chevalier explicitly disclose dynamically rewritable table routes either. Therefore, combining Wong, Fenner, and Chevalier does not yield routes that are "dynamically rewritable," as recited in Claims 3 and 7, much less "a first dynamically rewritable route ... [that] is configured to be rewritten with a second dynamically rewritable route," as in Claims 17 and 18. Claim 10, which depends from Claim 5, is patentable over Wong, Fenner, and Chevalier because Fenner does not remedy the deficiencies of Wong and Chevalier with respect to Claim 5, as discussed above.

Accordingly, Applicants respectfully submit that the rejection of Claims 3 and 7 is overcome and request withdrawal of the same.

CONCLUSION

In view of the above remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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